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09/800,608		03/07/2001	Martin W. McKinnon III	10263-33244	7465
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		NTA, INC.	DUONG, THOMAS		
5030 SUGA		OPERTY DEPARTN 'ARKWAY	ART UNIT	PAPER NUMBER	
LAWRENC	EVILLE,	GA 30044	2145		

DATE MAILED: 10/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

		Application No.	Applicant(s)
		09/800,608	MCKINNON ET AL.
	Office Action Summary	Examiner	Art Unit
		Thomas Duong	2145
Period fe	The MAILING DATE of this communication app	pears on the cover sheet wit	h the correspondence address
A SH WHIC - Exte after - If NC - Failt Any	ORTENED STATUTORY PERIOD FOR REPL' CHEVER IS LONGER, FROM THE MAILING D/ nsions of time may be available under the provisions of 37 CFR 1.13 SIX (6) MONTHS from the mailing date of this communication. O period for reply is specified above, the maximum statutory period v ure to reply within the set or extended period for reply will, by statute, reply received by the Office later than three months after the mailing ed patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNIC 36(a). In no event, however, may a re vill apply and will expire SIX (6) MONT , cause the application to become ABA	CATION. ply be timely filed THS from the mailing date of this communication. ANDONED (35 U.S.C. § 133).
Status			
· · · · · · · · · · · · · · · · · · ·	Responsive to communication(s) filed on <u>08 Air</u> This action is FINAL . 2b) This Since this application is in condition for allowar closed in accordance with the practice under E	action is non-final. nce except for formal matte	
Disposit	ion of Claims		
5)□ 6)⊠ 7)□ 8)□ Applicat 9)□ 10)□	Claim(s) 1-38 and 48-58 is/are pending in the at 4a) Of the above claim(s) is/are withdraw Claim(s) is/are allowed. Claim(s) 1-38 and 48-58 is/are rejected. Claim(s) is/are objected to. Claim(s) are subject to restriction and/or is/ares The specification is objected to by the Examine The drawing(s) filed on is/are: a) access applicant may not request that any objection to the Replacement drawing sheet(s) including the corrections.	wn from consideration. r election requirement. r. epted or b) □ objected to b drawing(s) be held in abeyand ion is required if the drawing(s	ce. See 37 CFR 1.85(a). s) is objected to. See 37 CFR 1.121(d).
-	The oath or declaration is objected to by the Ex	aminer. Note the attached	Office Action or form PTO-152.
	under 35 U.S.C. § 119		
a)	Acknowledgment is made of a claim for foreign All b) Some * c) None of: 1. Certified copies of the priority documents 2. Certified copies of the priority documents 3. Copies of the certified copies of the priority application from the International Bureau See the attached detailed Office action for a list of	s have been received. s have been received in Ap ity documents have been r ı (PCT Rule 17.2(a)).	oplication No received in this National Stage
	e of References Cited (PTO-892)		immary (PTO-413)
3) 🔲 Infori	e of Draftsperson's Patent Drawing Review (PTO-948) mation Disclosure Statement(s) (PTO-1449 or PTO/SB/08) r No(s)/Mail Date		/Mail Date ormal Patent Application (PTO-152) -

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DETAILED ACTION

Response to Amendment

This office action is in response to the applicants Amendment filed on August 8, 2005.
 Applicant amended *claim 55*. *Claims 1-38 and 48-58* are presented for further consideration and examination.

Claim Rejections - 35 USC § 103

- 2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- Claims 1-8 and 48-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over
 Bowman-Amuah (US006542593B1) and in view of Tunnicliffe et al. (US006272110B1).
- 4. With regard to *claims 1 and 48*, Bowman-Amuah discloses,
 - (a) monitoring network access usage by each user during a time interval;
 (Bowman-Amuah, col.21, lines 22-26, lines 34-39; col.22, lines 27-32, lines 46-49, lines 54-57)

Bowman-Amuah teaches of "[collecting] of usage data and events for the purpose of network performance and traffic analysis" (Bowman-Amuah, col.21, lines 24-26) and "to provide effective monitoring. Monitoring and reporting must provide SP management and customers meaningful and timely performance

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information across the parameter of the services provided" (Bowman-Amuah, col.22, lines 27-30). According to Bowman-Amuah, "this process ensures that the Network Performance goals are tracked, and that notification is provided when they are not met (threshold exceeded, performance degradation). This also includes thresholds and specific requirements for traffic and usage collection. In some cases, changes in traffic conditions may trigger changes to the network for the purpose of traffic control" (Bowman-Amuah, col.21, lines 34-41). Hence, Bowman-Amuah anticipated of tracking network utilization, traffic and usage collection for the purpose of providing effective monitoring and ultimately "to manage service levels that meet specific SLA commitments" (Bowman-Amuah, col.22, lines 31-32).

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(b) comparing said monitored network access usage by each user with a
predetermined threshold value; and (Bowman-Amuah, col.51, lines 42-63; col.52,
lines 49-54)

Bowman-Amuah teaches of "[determining] a current level of service and compare the current level of services with the minimum level of service that the service provider can provide without violating SLAs" (Bowman-Amuah, col.52, lines 51-54).

However, Bowman-Amuah does not explicitly disclose,

(c) soliciting a user to modify the user's SLA if the user's monitored network
 access usage varies from the predetermined value by a predetermined tolerance.
 Tunnicliffe teaches,

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(c) soliciting a user to modify the user's SLA if the user's monitored network
 access usage varies from the predetermined value by a predetermined tolerance.
 (Tunnicliffe, col.2, lines 5-22)

Tunnicliffe teaches that "the service provider has an advantage in that he knows in advance that the agreed levels may be exceeded and he can analyse the network in advance to see if extra bandwidth can be allocated" (Tunnicliffe, col.2, lines 15-18) and, if so, "the service provider could then make an offer to sell extra bandwidth to the customer" (Tunnicliffe, col.2, lines 18-19). Furthermore, according to Tunnicliffe, "equally, if the agreed bandwidth levels will be underutilised by the customer then both parties can make use of this information in a similar way" (Tunnicliffe, col.2, lines 19-22). Tunnicliffe discloses utilizing "a threshold value which may be for example, the maximum amount of bandwidth that a customer is allows to use on his virtual private network, as specified in the service level agreement between the customer and the network provider or operator" (Tunnicliffe, col.3, lines 31-35). Hence, Tunnicliffe anticipates of the network provider negotiating with the end user to modify the SLA due to the network utilization exceeding the predetermined threshold amount.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Tunnicliffe with the teachings of Bowman-Amuah to enable the customer, as well as the service provider, to take the proper action based on the bandwidth usage information and the service level agreement.

5. With regard to *claims* 2-3, Bowman-Amuah and Tunnicliffe disclose,

- wherein the threshold value represents a respective maximum level of network access for each user. (Bowman-Amuah, col.21, lines 34-43; col.51, lines 6-20, lines 37-41; Tunnicliffe, col.3, lines 31-41)
- wherein the threshold value represents a respective maximum burstable level of network access with target probability for each user. (Bowman-Amuah, col.21, lines 34-43; col.51, lines 6-20, lines 37-41; Tunnicliffe, col.3, lines 31-41)
- 6. With regard to *claims 4-8 and 49-53*, Bowman-Amuah and Tunnicliffe disclose,
 - wherein the threshold value represents a respective maximum level of network access for each user. (Tunnicliffe, col.2, lines 5-22)
 - wherein said step of soliciting a user comprises contacting the user via redirection of a web browser of the user to a solicitation web page. (Tunnicliffe, col.2, lines 5-22)
 - wherein said step of soliciting a user comprises contacting the user via generation and mailing of literature. (Tunnicliffe, col.2, lines 5-22)
 - wherein said step of soliciting a user comprises contacting the user via a telephonic communication. (Tunnicliffe, col.2, lines 5-22)
- 7. With regard to *claims 11 and 58*, Bowman-Amuah and Tunnicliffe disclose,
 - further comprising charging the user a fee for the modification of the SLA.
 (Tunnicliffe, col.1, lines 23-25, lines 32-36).
- 8. With regard to <u>claims 14-17 and 20</u>, Bowman-Amuah and Tunnicliffe disclose,

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 wherein said step of monitoring network access includes collecting data representative of the number of logical data units transmitted from and to each user during a time interval. (Bowman-Amuah, col.21, lines 22-26, lines 34-39; col.22, lines 27-32, lines 46-49, lines 54-57)

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- wherein said step of monitoring network access usage includes collecting data representative of the number of bytes and data packets transmitted from and to each user during a time interval. (Bowman-Amuah, col.21, lines 22-26, lines 34-39; col.22, lines 27-32, lines 46-49, lines 54-57)
- 9. With regard to *claims 24-26*, Bowman-Amuah and Tunnicliffe disclose,
 - further comprising, based on said monitored network access usage, allocating network access to each user for a future time interval. (Bowman-Amuah, col.1, lines 41-52; col.16, lines 56-66)
 - wherein said step of allocating network access comprises allocating network access equally to the users. (Bowman-Amuah, col.1, lines 41-52; col.16, lines 56-66)
 - further comprising prioritizing the users for allocating network access. (Bowman-Amuah, col.1, lines 41-52; col.16, lines 56-66)
- 10. With regard to *claims 27-33 and 54-57*, Bowman-Amuah and Tunnicliffe disclose,
 - wherein said step of prioritizing is based on the SLAs of the users, wherein the SLAs specify respective minimum levels of network access for the users, and said step of prioritizing includes comparing said monitored network access usages for the users with the specified respective minimum levels of network

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access, and awarding priority to a user when said respective monitored network access usage for such user falls below the user's specified respective minimum level of network access. (Bowman-Amuah, col.1, lines 41-52; col.16, lines 56-66; col.51, lines 6-20; lines 33-63; col.52, lines 39-54; Tunnicliffe, col.1, lines 36-40; col.3, lines 8-20)

- wherein said step of prioritizing is based on the SLAs of the users, wherein the SLAs specify respective time-of-day (TOD) minimum levels of network access for users, and said step of prioritizing includes comparing said monitored network access usages for such users during the specified respective TOD with the specified respective TOD minimum levels of network access, and awarding priority to a user when said monitored network access usage during the specified respective TOD for such user falls below the user's specified respective TOD minimum level of network access (Bowman-Amuah, col.1, lines 41-52; col.16, lines 56-66; col.51, lines 6-20; lines 33-63; col.52, lines 39-54; Tunnicliffe, col.1, lines 36-40; col.3, lines 8-20)
- wherein said step of prioritizing is based on the SLAs of the users, wherein the SLAs specify respective minimum levels of network access up to a maximum burstable levels with target probability for users, and said step of prioritizing includes comparing said monitored network access usage both with the respective minimum levels of network access for such users and with the respective maximum burstable levels of network access for such users, and comparing the instances the respective maximum levels of network access were obtained for such users out of all instances the respective maximum levels of network access were requested for such users. (Bowman-Amuah, col.1, lines 41-

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52; col.16, lines 56-66; col.51, lines 6-20; lines 33-63; col.52, lines 39-54; Tunnicliffe, col.1, lines 36-40; col.3, lines 8-20)

- wherein said step of prioritizing is based on the SLAs of the users, wherein the SLAs provide a respective fee for network access usage by 5 users, and said step of prioritizing comprises sorting such users based on each user's respective fee in decreasing order, with a user with a higher fee receiving priority over a user with a lesser fee. (Bowman-Amuah, col.1, lines 41-52; col.16, lines 56-66; col.51, lines 6-20; lines 33-63; col.52, lines 39-54; Tunnicliffe, col.1, lines 36-40; col.3, lines 8-20)
- wherein said step of prioritizing is based on the SLAs of the users, wherein the SLAs provide respective credits for levels of network access below respective guaranteed levels for users, and said step of prioritizing comprises sorting such users based on each user's respective credit in decreasing order, with a user with a higher credit receiving priority over a user with a lower credit. (Bowman-Amuah, col.1, lines 41-52; col.16, lines 56-66; col.51, lines 6-20; lines 33-63; col.52, lines 39-54; Tunnicliffe, col.1, lines 36-40; col.3, lines 8-20)
- wherein said step of prioritizing is based on the SLAs of the users, wherein the SLAs specify respective minimum levels of network access for users, and said step of allocating network access comprises allocating network access to such users equal to each user's specified respective minimum level of network access. (Bowman-Amuah, col.1, lines 41-52; col.16, lines 56-66; col.51, lines 6-20; lines 33-63; col.52, lines 39-54; Tunnicliffe, col.1, lines 36-40; col.3, lines 8-20)

- wherein said prioritizing is based on fairness considerations. (Bowman-Amuah, col.1, lines 41-52; col.16, lines 56-66; col.51, lines 6-20; lines 33-63; col.52, lines 39-54; Tunnicliffe, col.1, lines 36-40; col.3, lines 8-20)
- 11. With regard to *claims 34-38*, Bowman-Amuah and Tunnicliffe disclose,
 - wherein the users are prioritized based on user throughput during a time interval, with a user with lesser throughput rate receiving priority over a user with greater throughput rate. (Bowman-Amuah, col.1, lines 41-52; col.16, lines 56-66; col.51, lines 6-20; lines 33-63; col.52, lines 39-54; Tunnicliffe, col.1, lines 36-40; col.3, lines 8-20)
 - wherein the users are prioritized based on data loss for each user during a time interval, with a user with greater data loss rate having priority over a user with lesser data loss rate. (Bowman-Amuah, col.1, lines 41-52; col.16, lines 56-66; col.51, lines 6-20; lines 33-63; col.52, lines 39-54; Tunnicliffe, col.1, lines 36-40; col.3, lines 8-20)
 - wherein the users are prioritized based on network access usage for a particular time of day, with a user with lesser network access usage for the particular time of day receiving priority over a user with greater network access usage for the particular time of day. (Bowman-Amuah, col.1, lines 41-52; col.16, lines 56-66; col.51, lines 6-20; lines 33-63; col.52, lines 39-54; Tunnicliffe, col.1, lines 36-40; col.3, lines 8-20)
 - wherein the users are prioritized based on both user throughput and data loss during a time interval. (Bowman-Amuah, col.1, lines 41-52; col.16, lines 56-66;

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col.51, lines 6-20; lines 33-63; col.52, lines 39-54; Tunnicliffe, col.1, lines 36-40; col.3, lines 8-20)

- wherein users are prioritized based on an established minimum quality of service
 (QoS) standard. (Bowman-Amuah, col.1, lines 41-52; col.16, lines 56-66; col.51,
 lines 6-20; lines 33-63; col.52, lines 39-54; Tunnicliffe, col.1, lines 36-40; col.3,
 lines 8-20)
- 12. <u>Claims 9-10, 12-13, and 21-23</u> are rejected under 35 U.S.C. 103(a) as being unpatentable over Bowman-Amuah (US006542593B1), in view of Tunnicliffe et al. (US006272110B1), and further in view of Williams (US005867764A).
- 13. With regard to <u>claims 9-10 and 12-13</u>, Bowman-Amuah and Tunnicliffe disclose, See <u>claim 1</u> rejection as detailed above.

However, Bowman-Amuah and Tunnicliffe do not explicitly disclose,

- wherein the modification of the user's SLA includes guaranteeing a level of network access to the user on a permanent basis.
- wherein the modification of the user's SLA includes guaranteeing a level of network access to the user with a maximum burstable level of network access with target probability.
- wherein the modification of the user's SLA includes guaranteeing a level of network access to the user on a temporary basis.
- wherein network access comprises bandwidth across the shared communications medium for consumption by each user in conveying data of the user.

Williams teaches,

- wherein the modification of the user's SLA includes guaranteeing a level of network access to the user on a permanent basis. (Williams, col.4, lines 49-52; col.14, lines 11-14)
- wherein the modification of the user's SLA includes guaranteeing a level of network access to the user with a maximum burstable level of network access with target probability. (Williams, col.4, lines 49-52; col.14, lines 11-14)
- wherein the modification of the user's SLA includes guaranteeing a level of network access to the user on a temporary basis. (Williams, col.4, lines 49-52; col.14, lines 11-14)
- wherein network access comprises bandwidth across the shared communications medium for consumption by each user in conveying data of the user. (Williams, col.4, lines 49-52; col.14, lines 11-14)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Williams with the teachings of Bowman-Amuah and Tunnicliffe to enable the customer as well as the service provider to take the proper action based on the bandwidth usage information and the service level agreement.

14. With regard to <u>claims 21-23</u>, Bowman-Amuah and Tunnicliffe disclose,

See claim 1 rejection as detailed above.

However, Bowman-Amuah and Tunnicliffe do not explicitly disclose,

wherein the shared communications medium is part of a Shared Access Carrier
 Network.

 wherein the Shared Access Carrier Network comprises a Cable Network and the shared communications medium comprises a coaxial cable.

Williams teaches.

- wherein the shared communications medium is part of a Shared Access Carrier
 Network. (Williams, col.1, lines 25-58; col.7, lines 47-64)
- wherein the Shared Access Carrier Network comprises a Cable Network and the shared communications medium comprises a coaxial cable. (Williams, col.1, lines 25-58; col.7, lines 47-64)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Williams with the teachings of Bowman-Amuah and Tunnicliffe to enable the customer as well as the service provider to take the proper action based on the bandwidth usage information and the service level agreement.

- 15. <u>Claims 18-19</u> are rejected under 35 U.S.C. 103(a) as being unpatentable over Bowman-Amuah (US006542593B1), in view of Tunnicliffe et al. (US006272110B1), and further in view of Natarajan et al. (US006577597B1).
- 16. With regard to <u>claims 18-19</u>, Bowman-Amuah and Tunnicliffe disclose,

 See <u>claim 1</u> rejection as detailed above.

However, Bowman-Amuah and Tunnicliffe do not explicitly disclose,

 wherein said step of monitoring network access usage includes collecting data representative of the number of logical data units of the user that are dropped during a time interval. wherein said step of monitoring network access usage includes collecting data representative of the number of bytes and data packets of the user that are dropped during a time interval.

Natarajan teaches,

- wherein said step of monitoring network access usage includes collecting data representative of the number of logical data units of the user that are dropped during a time interval. (Bowman-Amuah, col.8, lines 26-38; col.14, line 66 col.15, line 5; col.16, lines 32-55)
- wherein said step of monitoring network access usage includes collecting data representative of the number of bytes and data packets of the user that are dropped during a time interval. (Bowman-Amuah, col.8, lines 26-38; col.14, line 66 – col.15, line 5; col.16, lines 32-55)
- wherein the Shared Access Carrier Network comprises a wireless network.
 (Williams, col.1, lines 25-58; col.7, lines 47-64)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Natarajan with the teachings of Bowman-Amuah and Tunnicliffe to enable the customer as well as the service provider to take the proper action based on the bandwidth usage information and the service level agreement.

Response to Arguments

17. Applicant's arguments with respect to *claims 1 and 48* have been considered but they are not persuasive.

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- 18. With regard to *claims 1 and 48*, the Applicants point out that:
 - Applicants respectfully submit that this is different than "monitoring network
 access usage by each user during a time interval" as disclosed in claim 1.
 - Applicant submits that this is vastly different than "soliciting a user to modify the
 user's SLA if the user's monitored network access usage varies from the
 predetermined value by a predetermined tolerance" as recited in claim 1.
 However, the Examiner finds that the Applicants' arguments are not persuasive and
 maintains that Bowman-Amuah and Tunnicliffe disclose,
 - (a) monitoring network access usage by each user during a time interval;
 (Bowman-Amuah, col.21, lines 22-26, lines 34-39; col.22, lines 27-32, lines 46-49, lines 54-57)

Bowman-Amuah teaches of "[collecting] of usage data and events for the purpose of network performance and traffic analysis" (Bowman-Amuah, col.21, lines 24-26) and "to provide effective monitoring. Monitoring and reporting must provide SP management and customers meaningful and timely performance information across the parameter of the services provided" (Bowman-Amuah, col.22, lines 27-30). According to Bowman-Amuah, "this process ensures that the Network Performance goals are tracked, and that notification is provided when they are not met (threshold exceeded, performance degradation). This also includes thresholds and specific requirements for traffic and usage collection. In some cases, changes in traffic conditions may trigger changes to the network for the purpose of traffic control" (Bowman-Amuah, col.21, lines 34-41). Hence, Bowman-Amuah anticipated of tracking network utilization, traffic and usage collection for the purpose of providing effective monitoring and

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ultimately "to manage service levels that meet specific SLA commitments" (Bowman-Amuah, col.22, lines 31-32).

(c) soliciting a user to modify the user's SLA if the user's monitored network
 access usage varies from the predetermined value by a predetermined tolerance.
 (Tunnicliffe, col.2, lines 5-22)

Tunnicliffe teaches that "the service provider has an advantage in that he knows in advance that the agreed levels may be exceeded and he can analyse the network in advance to see if extra bandwidth can be allocated" (Tunnicliffe, col.2, lines 15-18) and, if so, "the service provider could then make an offer to sell extra bandwidth to the customer" (Tunnicliffe, col.2, lines 18-19). Furthermore, according to Tunnicliffe, "equally, if the agreed bandwidth levels will be underutilised by the customer then both parties can make use of this information in a similar way" (Tunnicliffe, col.2, lines 19-22). Tunnicliffe discloses utilizing "a threshold value which may be for example, the maximum amount of bandwidth that a customer is allows to use on his virtual private network, as specified in the service level agreement between the customer and the network provider or operator" (Tunnicliffe, col.3, lines 31-35). Hence, Tunnicliffe anticipates of the network provider negotiating with the end user to modify the SLA due to the network utilization exceeding the predetermined threshold amount.

Therefore, the Applicants still failed to clearly disclose the novelty of the invention and identify specific limitation, which would define patentable distinction over prior art.

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Conclusion

- 19. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.
- 20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas Duong whose telephone number is 571/272-3911. The examiner can normally be reached on M-F 7:30AM 4:00PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason D. Cardone can be reached on 571/272-3933. The fax phone numbers for the organization where this application or proceeding is assigned are 571/273-8300 for regular communications and 571/273-8300 for After Final communications.

Thomas Duong (AU2145)

October 27, 2005

JAGON CAROONS SOR ANDLYX